

Integrated regional water planning and development: a case study in the Lower Moulouya Basin, North East Morocco

Nazik El Yaalaoui

Colorado State University, Department of Civil and Environmental Engineering.

Abstract. A feature of the new paradigm of Integrated Water Resources Management (IWRM) is used to show how better management of a regional water project can increase profit to improve the regional economy and social welfare. The project is in the Lower Moulouya Basin in North-East Morocco. The feature is the economic analysis of water scarcity at the scale of a regional economy. Other IWRM techniques are also used such as Social Adaptive Capacity, demand-side management, public participation, and network water governance. Use of IWRM techniques is demonstrated by analysis of with and without situations in an economic model called the “Social Planner’s Model” applied to the Lower Moulouya Irrigation Project. This model within the IWRM framework is used to balance between optimizing satisfaction of water demands and charging a price for water to conserve it and recover costs of managing it. The model results show the difference in profit between a well-planned situation of water supplies and the present one. Remedies would flow from an action plan that would address the economic and social gaps and form the basis of a Plan for Regional Sustainable Development, where human development and capacity building are keys to changing behavior towards water.